

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A process for the preparation and purification of protein(s) such as viral antigenic proteins, other recombinant therapeutic proteins, characterized in that the purification is carried out by a novel technique termed as using Hydrophobic Interaction Matrix (HIMAX) technology which is as herein described and recovering the said protein(s). comprising:

(a) lysing, in the absence of a detergent, vector cells expressing said protein(s) to obtain a cell lysate;

(b) centrifuging the cell lysate between 1000g and 10,000g to form a supernatant portion and solid portion;

(c) obtaining the solid portion from step (b) wherein the solid portion comprises the protein(s);

(d) suspending the solid portion in a buffer of pH 6 to 7.5;

(e) forming an insoluble matrix after step (d) by the addition of divalent ionic salt having a concentration ranging from 0.2% to 10% with counter ions of either phosphate, chloride and/or acetate solution to the suspension;

(f) subjecting the insoluble matrix to centrifugation optimally to form a pellet;

(g) subjecting the pellet from step (f) to a repeated desorption process to release the protein(s) from said insoluble pellet by using either Tris buffer of pH 8.0 to 8.5 or Tris buffer with EDTA at pH 7.0 to 8.0; and

(h) recovering the protein(s) through hydrophobic chromatography.

2. (Currently amended) The process as claimed in of claim 1 wherein [[the]] said protein(s) is/are made to be expressed in the vectors like prokaryotic cell or eukaryotic cell like E.Coli, yeast-etc.

3. (Currently amended) [[The]] ~~A process as claimed in the preceding claims wherein the said process for the preparation and purification of protein(s) by using Hydrophobic Interaction Matrix (HIMAX) technology comprising-~~ comprising:

- (a) [[the]] ~~lysing~~ vector cells ~~expressing said protein(s)~~ are subjected to lysis in the absence of a detergent to obtain a cell lysate;
- (b) subjecting the cell lysate ~~of steps~~ to centrifugation ranging from 1000g to 10,000g ;
- (c) obtaining a ~~solid pellet portion~~ from step (b) ~~by decantation~~ wherein the ~~solid pellet portion~~ comprising ~~comprises~~ [[the]] said proteins;
- (d) suspending the ~~solid pellet portion~~ in a buffer of pH 6 to 7. 5 ~~having divalent ions ranging from 0.2% to 10% and counter ions of either phosphate, chloride and/or acetate optimally treating this with~~ ~~wherein a detergent is not used such as herein described to solubulize the minute impurities if any~~; and
- (e) ~~eluting said protein(s) with Tris base salts of high basicity as a part of HIMAX technology, the said protein (s) is/are captured by the addition of divalent ionic salt having concentration ranging from 0.2% to 10% with counter ions of either phosphate, chloride and/or acetate solution to form an insoluble matrix;~~
- (f) ~~subjecting the said insoluble matrix for centrifugation optimally to form pellets; and~~
- (g) ~~(f) subjecting repeated desorptions process to release the bound antigen from insoluble matrix/pellets by using either Tris buffer of Ph 8. 0 to 8.5 or Tris buffer with EDTA at Ph 7.0 to 8.0;~~
- (h) ~~finally recovering the said proteins through ultrafiltration, chromatography on colloidal silica, hydrophobic and or affinity chromatography, ion exchange, diafiltration, sterile filtration or a combination thereof.~~

4. (Currently amended) The process as claimed in any of the preceding claims of claim 2, wherein [[the]] said protein is a viral antigen.

5. (Currently amended) The process ~~as claimed in~~ of claim 4 wherein ~~inactivation of the viral antigens is carried out by a known manner antigen is inactivated before said subjecting to desorption (by chromatography) step process.~~

6. (Currently amended) The process ~~as claimed in claims 1 to 3 of claim 5,~~ wherein [[the]] said protein is one other than a viral antigen.

7. (Currently amended) The process ~~as claimed in~~ of claim 6 wherein said inactivation step is avoided before desorption.

8. (Currently amended) The process ~~as claimed in the preceding claims of claim 7,~~ wherein the chromatographically purified fractions containing the ~~desired~~ protein(s) are pooled for diafiltration ~~and/or~~ and/or for sterile filtration.

9. (Currently amended) The process ~~as claimed in the preceding claims of claim 8,~~ wherein the divalent ionic salt is a salt of divalent cations is preferably Zn cation Zn, or Ca, or Mg, or a combination thereof.

10. (Withdrawn) The process as claimed in step (d) of claim 3 wherein the detergent is non-ionic detergent.

11. (Currently amended) The process as claimed in ~~step (d) of~~ claim 3, wherein the detergent is not used for the preparation and purification of protein(s).

12. (Withdrawn) The process as claimed in step (h) of claim 3 wherein ultra filtration is carried out using membrane filters of 100-300K molecular weight cut off.

13. (Withdrawn) The process as claimed in step (h) of claim 3 wherein the ion-exchange matrices is selected from anionic exchange resins such as sulphated cellulose/DEAE matrices.

14. (Currently amended) The process as ~~claimed in the preceding claims of claim 8,~~ wherein the said proteins are highly purified without the loss of biological activity.

15. (Currently amended) The process as claimed in any of the preceding claims wherein the contaminants ~~like nucleic acid fragments etc.~~, does do not interfere with/affect the [[said]] process of preparation and purification of [[the]] said proteins. **[Suggest you delete this claim]**

16. (Currently amended) The process as ~~claimed in any of the preceding claims of claim 2,~~ wherein said proteins are viral antigens, recombinant proteins, and/or biotherapeutic proteins etc., are simultaneously prepared and purified.

17. (New) The process of claim 16, wherein said proteins are simultaneously prepared and purified.

18. (New) The process of claim 16, wherein said proteins are selected from the group consisting of: Rabies antigen, Hepatitis A antigen, Diphteria toxoid and Tetanus toxoid.